AMENDMENTS TO THE CLAIMS:

        This listing of claims replaces all prior versions and listings of claims in the

application:

LISTING OF CLAIMS:

        1-34.   (Canceled)

        35. (New) A method of measuring transmission characteristics of radio channels in a

radio communications system having base stations and a radio station, the radio communications

system utilizing a timeslot structure in a time frame for transmitting data, the method

comprising:

        transmitting the data as bursts from a first of the base stations to the radio station, each

burst having a channel measurement sequence, the first of the base stations transmitting the

channel measurement sequence in at least one timeslot in which no data is transmitted from the

one of the base stations to the radio station.

        36. (New) The method of claim 35, wherein the channel measurement sequence is

transmitted using at least one of (i) a constant power level and (ii) a number of base stations

transmitting at the same time.

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37. (New) The method of claim 35, wherein the channel measurement sequence is transmitted in the middle of a burst.

38. (New) The method of claim 35, wherein the base stations are synchronized.

39. (New) The method as claimed in claim 38, wherein cyclic correlation is used for channel measurement.

40. (New) The method of claim 39, wherein individual base stations use a same channel measurement sequence.

41. (New) The method of claim 40, wherein the channel measurement sequence is transmitted with a different code phase by different base stations.

42. (New) The method of claim 35, wherein a channel measurement sequence in a predetermined timeslot in the time frame has an identifier.

43. (New) The method of claim 42, wherein a same channel measurement sequence is used in the predetermined timeslot as is used in other time slots in the time frame, and wherein phase modulation is used in the channel measurement sequence in the predetermined timeslot.

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44. (New) The method of claim 43, wherein 180° phase modulation of the channel measurement sequence is used in the predetermined timeslot from one time frame to a next time frame.

45. (New) The method of claim 42, wherein the predetermined timeslot is a 0-th timeslot.

46. (New) A radio communications system having a number of base stations and at least one radio station which uses the method of claim 35.

47. (New) The radio communications system of claim 46, wherein the radio communication system is a TDD radio communication system.

48. (New) The radio communications system of claim 46, wherein the radio communication system is a FDD radio communication system.